

**II. REMARKS**

Favorable reconsideration of this application in the light of the amendments and the following discussion is respectfully requested. Claims 1, 4 and 37 have been amended to further define the invention. Support for the amendments can be found, for example, at page 2 line 15, page 3 lines 21-23, and page 4 lines 11-12 of the specification.

New claims 47-63 have been added to provide adequate coverage for the invention. Support for these claims can be found in the original claims, the examples, and, for example, page 2 lines 13-25, page 3 lines 7-13, page 5 lines 13-26, page 7 lines 7-21 and 27-30, page 10 lines 3-20, page 13 lines 21-28, and page 28 lines 17-27.

Claim 34 has been canceled.

Claims 1-28, 37-39, 45-63 are pending.

**Allowable Subject Matter**

Applicants appreciate the Examiner's allowance of claims 22-28 and indication that claims 3, 10, 11, 13, 15-20, 45 and 46 contain allowable subject matter.

**§ 112 Rejections**

Claim 4 has been rejected under 35 U.S.C. 112, first paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner has objected to the specific language of claim 4, and has offered revised language for claim 4.

Claim 4 has been amended as suggested by the Examiner. Claim 4 as amended fully complies with 35 U.S.C. 112, second paragraph and the rejection should be withdrawn.

**§ 102 Rejections**

Claim 34 has been rejected under 35 U.S.C. 102(e) as anticipated by Chheang et al. 2003/0100654, the Examiner asserting that Chheang et al. disclose hot melt adhesive and at least partially exfoliated organophilic clay in claims 1-2.

Claim 34 has been canceled by this amendment, rendering the rejection moot.

**§ 103 Rejections**

Claims 1, 2, 4-9, 12, 14, 21, and 37-39 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Gerace et al. US4900771 or Marinow WO 02/10235, with Marinow US6756450 serving as its English translation, in view of Kolb et al. 6,586,483.

The Examiner notes that Gerace et al. teach a hot applied adhesive plastisol comprising PVC, plasticizers, polyethylene, and EVA in claim 1, copolymers in claim 2, plasticizers in claim 3, wax and stabilizers in claim 11, and waxes in column 6, lines 30-39. Marinow is said to recite ethylene acrylic acid copolymer and ethylene-propylene-maleic anhydride copolymer with diisononyl phthalate in Example 1. For adhesives and bond materials, the Examiner refers to column 10, lines 27-39. Kolb then is cited as revealing foamed hot melt adhesive in claim 42.

The Examiner concludes that it would have been obvious to select applicants' ingredients from the list of equivalents listed by Gerace et al.; that, since the polymers described by Marinow are homologues of the ones claimed by applicants, substitution would have also been obvious; and that Kolb shows that foaming hot melt adhesives is known.

Applicants respectfully traverse the rejections of claims 1, 2, 4-9, 12, 14, 21, and 37-39 under §103. According to the MPEP, "[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the

prior art reference (or references when combined) must teach or suggest all the claim limitations." See MPEP 2143 (emphasis added).

Claim 1 defines a multiple component liquid plastisol/hot melt hybrid adhesive composition comprised of a polymeric reinforcing phase component and an adsorbent phase component, both as heterogeneously dispersed particulates within a liquid component, wherein the reinforcing phase component is substantially incompatible with the liquid component, the adsorbent phase component is compatible or substantially more compatible with the liquid component than is the reinforcing phase component, and the reinforcing phase and adsorbent phase components are partially compatible with one another, the composition being chlorine free and having the rheological characteristics of a liquid dispersion at room temperature and being capable of forming a molten blend at elevated temperatures that solidifies into a non-exuding solid adhesive upon cooling.

Gerace et al., on the other hand, teach hot applied plastiols that require 20% to 35% of a polyvinylchloride resin. Gerace et al. thus do not teach or suggest, and in fact **teach away from**, a composition that is chlorine free. As a result, Gerace et al. and Kolb et al. cannot be combined to establish a prima facie case of obviousness of amended claim 1.

Further, while Marinow et al. describe a chlorine-free polyolefin-based plastisol or organsol, they do not teach an adsorbent phase that allows for the preparation of a non-exuding solid material. The plastisol of Marinow et al. is formed with a precipitated polyolefin in a reactive polyaddition liquid dispersion medium. See, for example, claim 1, column 9 lines 18-32, and the examples.

The polyolefin component in its precipitated form is an important aspect of the composition described by Marinow et al. To achieve this, the polyolefin is heated in the reactive liquid to a temperature greater than the melt temperature of the polyolefin, and then cooled down to force the polyolefin to precipitate into particulates that become dispersed in the reactive liquid. If the composition defined by claim 1 of the present application is heated to form a molten blend and then cooled to below the melt

temperature, it does not form a precipitated dispersion, but rather forms a non-exuding solid due to the presence of the defined adsorbent phase.

The fact that the polyolefin of Marinow et al. precipitates from the reactive liquid medium shows that the polyolefin of their composition would not constitute an "adsorbent phase." If the polyolefin of Marinow et al. were to retain or "adsorb" the liquid after the described melting and cooling steps, it would not be possible to form the composition desired by Marinow et al., as a solid would result, instead of a dispersion, upon cooling.

Accordingly, Marinow et al. and Kolb et al. cannot establish a *prima facie* case of obviousness of amended claim 1.

As with claim 1, independent claim 37 defines a liquid plastisol/hot melt hybrid composition that is chlorine free and that has the rheological characteristics of a liquid dispersion at room temperature, and can be fused at elevated temperatures and then solidified into a non-exuding solid plastic material upon cooling. Accordingly, claim 37, along with each of the claims dependent from claims 1 and 37, are also patentable over the cited references.

New claims 47-63 further define the invention and are each patentably distinct over the cited references. Thus, for example, new claim 53 a liquid plastisol/hot melt hybrid adhesive composition which is initially liquid at room temperature, becomes a molten solution at an elevated temperature, becomes a non-exuding thermoplastic solid adhesive upon cooling, and which is chlorine free. New claim 57 also defines a composition that, *inter alia*, becomes a non-exuding thermoplastic solid adhesive upon cooling. Applicants note that the composition of Marinow et al., on the other hand, solidifies as a thermoset.

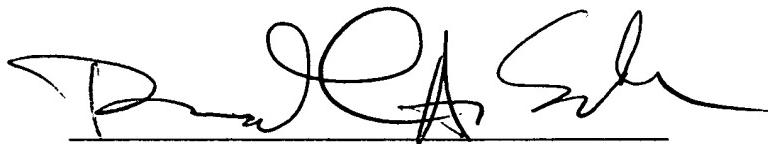
The remaining newly added claims are also patentably distinct over the cited references when taken alone or in combination.

### Conclusion

In view of the above discussion and amendments, all of the claims of record define patentable subject matter over the art of record. Therefore, the application is in condition for allowance, and an early Notice of Allowance is respectfully requested.

Should the Examiner wish to modify any of the language of the claims, applicant's attorney suggests a telephone interview in order to expedite the prosecution of the application.

Respectfully submitted,



Donald A. Schurr  
Registration No. 34,247

ATTORNEYS

Marshall & Melhorn, LLC  
4 Seagate, 8<sup>th</sup> Floor  
Toledo, Ohio 43604  
Phone: (419) 249-7145  
Fax: (419) 249-7151